<u>REMARKS</u>

Figure 8 has been amended to correct typographical errors.

Claims 1-3, 5, 6, 8-12, 14, 15 and 17 stand rejected under 35 U.S.C. §102(e) as being anticipated by Chu et al. Applicants respectfully traverse this rejection, because the Chu et al. reference is not prior art to the subject application. The Chu et al. reference has a filing date of October 14, 2003. However, the present application claims the priority of a Japanese patent application filed on May 9, 2003, which predates the filing date of the Chu et al. reference.

Applicants also traverse this rejection, because the cited reference does not disclose (or suggest) retry writing the write data of the skipped sector protected in the buffer to the same skipped sector after the stream type commands have been executed.

In the present invention, when a defective sector is encountered during the execution of stream type commands, the data writing process is stopped immediately and then restarted at some later point in time, since the magnetic disk is still rotating even when the writing process has stopped. After the stream type commands have been executed, writing of the write data of the skipped sector, now protected in a buffer, is retried to the same skipped sector. In this manner, the write data is written to the skipped sector, on which the data was initially intended to be stored.

The Chu et al. reference relates to a defect management for HDD according to a floating-spare-region sparing technique, in which spare sectors are provided at the end of the user data. The reference teaches that when "it is determined that the physical sector is defective, flow continues to step 507 where the physical sector is skipped" (paragraph [0038]). Significantly, the reference further teaches that "each time a physical

<u>In the Drawings</u>:

The attached sheet of drawings includes changes to Fig. 8.

Attachments: (1) Replacement Sheet
                (1) Annotated Sheet

sector is skipped, one of the spare data sectors at the end of the current portion of the data cluster being written will be reassigned to store a block of data" (paragraph [0038]).

In other words, the Chu et al. reference teaches that during the writing process, the defective sector is simply skipped and the data for the skipped sector is stored in a spare sector during the execution of the stream type commands. No attempt is made to retry writing to the skipped sector. In contrast, if a sector is skipped in the present invention, writing of the data intended for the skipped sector is retried on the same skipped sector, after the stream type commands have been executed. This feature is not disclosed (or suggested) in Chu et al. Claims 1 and 10 and their respective dependent claims 2-9 and 11-18 are allowable over Chu et al. for this reason, also.

Claims 4, 7, 13 and 16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Chu et al. in view of Yang or Kakihara et al. These claims depend either from claims 1 and 10 and are allowable for the reasons given with respect to their independent claims, and because of the additional features that they describe. Withdrawal of the rejections is respectfully requested.

For all of the above reasons, Applicants request reconsideration and allowance of the claimed invention. The Examiner should contact Applicants' undersigned attorney if a telephone conference would expedite prosecution.

Respectfully submitted,

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FIG. 8

(A)

S18

EXECUTE ~~NOMAL~~ *NORMAL*
WRITE PROCESS
(MPU WRITE TO HD
VIA HDC)

S20

HAS
~~IS~~ ERROR
OCCURRED? → NO → S28

YES

S22

CALCULATE
SHORTEST START
SECTOR NUMBER
FOR RESTART

WRITE
COMPLETE? → YES

NO

S24

PROTECT DATA OF
ERROR SECTOR
AND SKIPPED
SECTOR

S30

UPDATE COMMAND
TABLE
(CLEAR PROTECT
BIT)

S26

START REWRITE
PROCESS
(MPU STARTS
WRITING OF HD VIA
HDC)

TO (C) IN FIG. 7